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Applicants: Robert D. Freeman et al.

Title: Tilt Focus Mechanism For An Optical Drive (As Amended)

Application No.: 09/815,377

Filing Date: March 21, 2001

Examiner: Julie Anne Walke

Group Art Unit: 2652

Docket No.: M-8745-1P US

Confirmation No. 3940

Irvine, California  
January 26, 2006Via Facsimile to (571) 273-8300**Mail Stop: AF - EXPEDITED PROCEDURE**

Commissioner for Patents

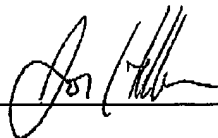
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**CERTIFICATION OF FACSIMILE TRANSMISSION**

I hereby certify that the following documents are being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below:

- 1) Transmittal of Notice of Appeal; and
- 2) Pre-Appeal Brief Request For Review

Dated: January 26, 2006Number of pages (including this sheet): 6

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Robert D. Freeman; Thomas E. Berg; David W. Niss; Peter J. Raymond

Assignee: DPHI Acquisitions, Inc.

Title: TILT FOCUS MECHANISM FOR AN OPTICAL DRIVE (as amended)

Serial No.: 09/815,377

Filing Date: March 21, 2001

Examiner: Julie Anne Watko

Group Art Unit: 2652

Docket No.: M-8745-1P US

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Irvine, California  
January 26, 2006Via Facsimile: (571) 273-8300Mail Stop AF  
COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

In response to the Final Office Action dated July 26, 2005, Applicants submit the following pre-appeal brief request for review.

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### REMARKS

Claims 1 is pending. Claims 2-21 are withdrawn. Applicant respectfully request reconsideration of the pending claim.

Applicant has filed this pre-appeal brief request for review in light of the following clear error in the July 26, 2005 final office action.

1.) The Alon and Lee references do not suggest or teach the desirability of the claimed invention

As set forth in MPEP 2143.01, obviousness "can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." Thus, motivation to combine references is improper if the motivation is gleaned from the Applicants' disclosure. But that is precisely what was done in the July 26<sup>th</sup> final office action.

In that regard, the Examiner has recognized that the Alon reference (USP 6,449,225) is "silent regarding a portion pivotally mounted to the remainder of the actuator assembly." Indeed, Alon plainly shows a rigid, one-piece, "swing arm" (element 22) in Figure 2. As discussed with regard to Figure 3a and 3b, Alon's optical pickup unit (element 30 or 31) may be mounted at the distal end of the swing arm on an axis 35 or 39. Portions of these units rotate about an axis (elements 35 or 39 in Figs. 3A and 3B, respectively) to compensate for the rotary motion of the swing arm (see, e.g., Col. 6, lines 3 - 6). The swing arm must carry an objective lens (element 18) at its distal end to form the laser beam spots (elements 26) of Figure 2. To provide focusing, Alon states in Col. 3, line 55 that there is a "servo mechanism" to move objective lens 18 to maintain focus. Referring again to Fig. 3a and 3b, that actuation must be with regard to the "optical assembly" of the optical pickup unit (element 33). In the embodiment of Figure 3b, that actuation would be internal within the optical assembly.

Rather than have the complication of a rotating optical pickup unit at the distal end of the swing arm, Alon disclosed in Figure 3c that just the prism 17 and objective lens 18 could be disposed at the end of the swing arm. Regardless of the embodiment chosen by Alon, the objective lens must thus be held by an actuator that either pulls or pushes the lens with respect

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to the swing arm. The swing arm stays as a rigid, one-piece member as shown in Figure 2 throughout this focusing.

Applicants claimed actuator assembly is dramatically different in that the focusing is accomplished through the provision of a pivotally-mounted distal portion. To provide the motivation to provide such a portion, the Examiner points to the Lee reference (USP 6,236,634), which disclosed the provision of a distal pivoting portion on a non-pivoting arm that is moved in a "sled" type fashion for tracking as seen in Figure 9. This type of "X plane" translation is standard in the optical disk arts and is akin to the motion imparted to the pen in the familiar "etch-a-sketch" toy. For example, if one were to pry the CD-ROM optical drive out of their personal computer, this same type of translation would be seen for tracking purpose.

Thus, Lee and Alon are like oil and water: one uses a conventional sled format for tracking and the other uses a pivoting swing arm. To provide the motivation to combine such disparate approaches, the Examiner states in part that one would want to "avoid a head crash from a flying height that is too low." Such a statement has no application to the Alon reference – Alon is a standard "far field" optical system that does not involve the "flying head" of Lee wherein the lens rides on the disk. The Examiner adds that additional motivation would be "to keep a light beam focused on the surface of the optical disk as taught by Alon." However, as discussed above, Alon performs his focusing without any such pivoting portion. Thus, the motivation to combine simply boils down to a hindsight "it strikes me as obvious" determination.

Applicants respectfully point out that inventions always build upon what is known. Here, Applicants readily admit that it was known to employ swing arms for tracking. Moreover, in the context of sled tracking, it is known to employ a pivoting portion for focusing. But it was not known to combine a swing arm with a pivoting portion for focusing. Indeed, such a combination leads to an undesirable coupling of focusing and tracking, which Applicants solved through their inventive "all-digital servo," the subject of numerous other issued and pending applications. Applicant invented this unusual combination because it leads to dramatic miniaturization improvements. It may seem obvious in hindsight, but that is often the case. In sum, it is clear error to combine the teachings of Alon and Lee reference because the only motivation to do so arises from Applicants' disclosure.

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**CONCLUSION**

For the above reasons, pending Claim 1 is now in condition for allowance and allowance of the application is hereby solicited. If the Examiner has any questions or concerns, the Examiner is hereby requested to telephone Applicant's Attorney at (949) 752-7040.

I hereby certify that this paper is being facsimile transmitted to (571) 273-8300 at the U.S. Patent and Trademark Office on the date shown below.



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Dated: January 26, 2006

Respectfully submitted,



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